

Amendments to the Claims

Listing of Claims:

Claims 1-6 (canceled)

Claim 7 (new): A device for protecting an electronic module (μ C, C-T, T2) disposed in a control device (ST) in a multi-voltage on-board electrical system (12V/42V) having an accumulator (BAT1) with a low on-board electrical system voltage (Vbat1) against short circuiting to a high on-board electrical system voltage, comprising:

a MOSFET transistor (T1) having a drain source path (D-S) inserted between a control device connection (A, A1, A2) and a connection (E, E1, E2) of the electronic module (μ C, C-T, T2), and with:

a source (S) connected to the connection (E, E1, E2) of the electronic module (μ C, C-T, T2);

a drain (D) connected to the control device connection (A, A1, A2); and

a gate (G);

a Zener diode (D1) connected between said gate (G) and said source (S) of said MOSFET transistor (T1);

a gate resistor (Rv) connected between said gate (G) of said MOSFET transistor (T1) and a positive pole (+Vbat1) of the first accumulator (BAT1); and

a diode (D2) connected in parallel with said gate resistor (Rv), for conducting current in a direction from said gate (G) to the positive pole (+Vbat1) of the accumulator (BAT1).

Claim 8 (new): The device according to claim 7, wherein said electronic module is disposed in control device (ST) for controlling low-power consumers or for processing/transmitting data.

Claim 9 (new): The device according to claim 7, wherein said Zener diode (D1) is configured with a breakdown voltage (Vz) lower than a maximum permitted gate

source voltage (Vgs) of said MOSFET transistor (T1).

Claim 10 (new): The device according to claim 7, wherein said MOSFET transistor (T1) has a threshold voltage (Vth) and, in an event of a short circuit to a highest voltage of the on-board electrical system active at the device connection (A, A1, A2), a source voltage (Vs) of said transistor (T1) is limited to a value $Vs = V_{bat1} - V_{th}$, where Vs is the source voltage, V_{bat1} is the low on-board voltage (V_{bat1}), and V_{th} is the threshold voltage of said transistor (T1).

Claim 11 (new). The device according to claim 7, wherein, on occurrence of a short circuit to a highest voltage of the on-board electrical system active at the device connection (A, A1, A2), said diode (D2) connected in parallel to said gate resistor (Rv) limits the gate voltage (Vg) of said MOSFET transistor (T1) to a value $Vg = V_{bat1} + V_d$, wherein Vg is the gate voltage, V_{bat1} is the low on-board voltage (V_{bat1}), and V_d is a conducting state voltage (V_d) of said diode (D2).

Claim 12 (new): The device according to claim 7, with the protective circuit (Ss, Ssa, Ssb) integrated in an ASIC.

Claim 13 (new): The device according to claim 7, wherein the multi-voltage on-board electrical system is a motor vehicle on-board electrical system.